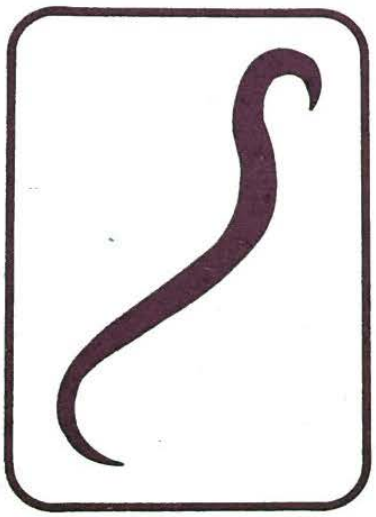
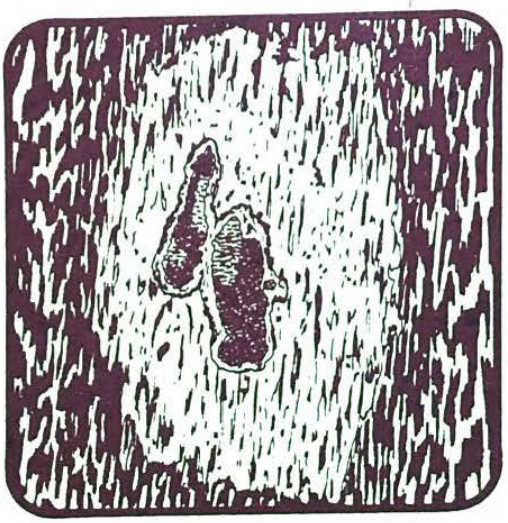
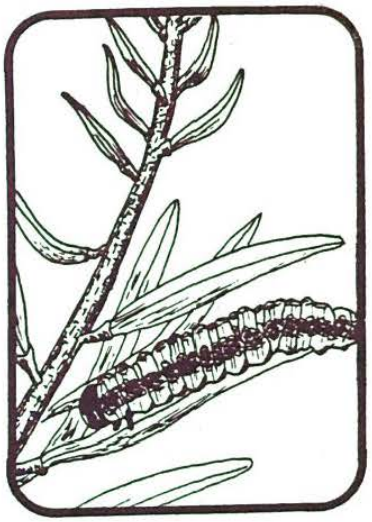
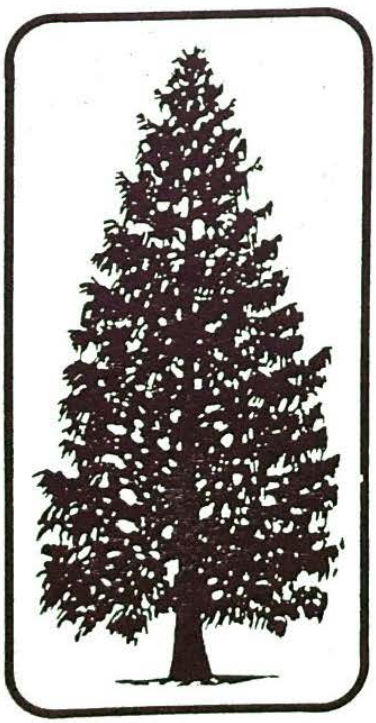
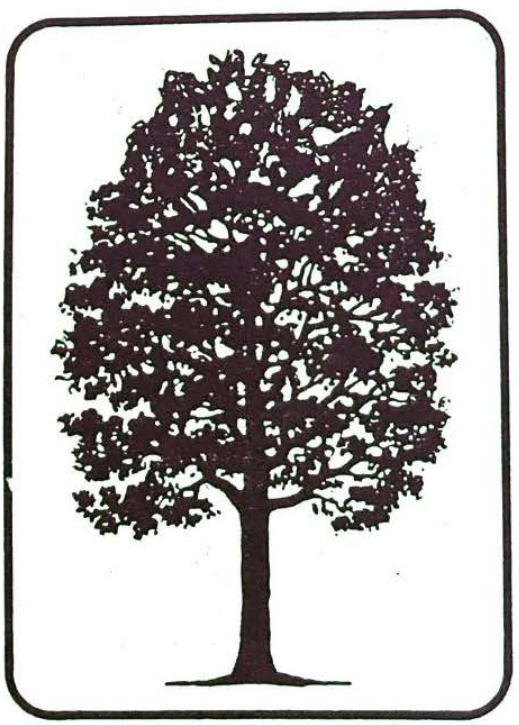
1992 Illinois Forest Pest Report

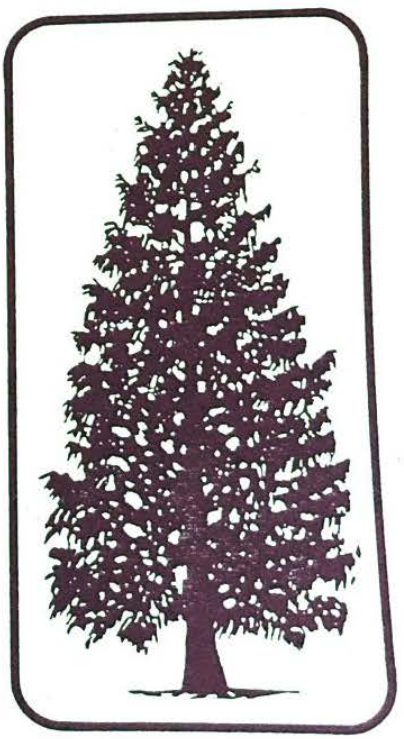












1992 Illinois Forest Pest Report

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Urbana-Champaign, Illinois
April 1993

1992 Illinois Forest Pest Report

1992-1993 Illinois Forest Pest Workshops, Exhibits, and Video

During 1992, forestry workshops were held in Oglesby and Benton, IL. on May 14, and May 23, respectively. The purpose of these workshops were to update information on the control of the economically important pests attacking trees in Illinois. Emphasis was given to field recognition of the insects and diseases. Cultural, biological, and chemical control measures were discussed. Participants were encouraged to bring insect and tree disease samples to the meetings. Slides were shown on given topics followed by presentations of field samples with time for discussions. A USDA Forest Service video film was presented at each workshop which explained the life histories and the differences between the European and Asian gypsy moths A USA Department of Defense video film was shown which explained information on the prevention of lyme disease, symptoms of the disease, and the vector life cycle.

Each year educational exhibits featuring forest insect pests are shown at seminars, trade shows, and state fairs. During 1992 an exhibit featuring the gypsy moth was shown. The exhibit was composed of colored photographs depicting the various life stages of the gypsy moth, forest damage, moth predators, parasites, and diseases, with a chart showing tree species susceptibility. Also presented was a USDA Forest Service poster which featured colored photographs of the gypsy moth life stages with information encouraging the public to be aware of the danger of transporting life stages of the gypsy moth on camping equipment, vehicles, etc. from gypsy moth infested areas. A smaller version of the USDA poster for wallet storage was distributed whenever the exhibit was shown. The exhibit and dates shown, with the number of gypsy moth cards distributed in parenthesis was presented at the following locations: American Nurserymen's Mid-Am Trade Show, Jan. 16-18, (2500 cards). Illinois State Fair, Aug. 8-18 (3000 cards), and Du Quoin State Fair, Aug. 24-Sept. 2 (1000 cards).

Other educational exhibits were featured as follows: University of Illinois 37th Annual Flower and Garden Show, April 11, "Common Insects Attacking Trees and Shrubs", Champaign, IL; Home Nursery Summer Meeting, Sept. 14, "Insects of Evergreens", Albers, IL; University of Illinois Agricultural Open House, Feb. 12-13, 1993, "Take a Closer Look at Your Trees", Champaign, IL. At all of these exhibits credit was given to the USDA Forest Service, Illinois Department of Conservation, and Illinois Department of Agriculture, for their financial support and/or sources of information.

In a cooperative project between Purdue University, University of Illinois, USDA Forest Service, and the Joyce Foundation, a six and a half minute color video tape was produced on the common pine shoot beetle. The video shows the type of shoot damage caused by the adult feeding, the adult beetle within a shoot, and general cultural practices to follow to avoid a population build-up. Beginning in November 1992, copies of the video were shipped throughout the United States to various interest groups.

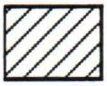
Maps of Forest Insects

In this section maps are presented which feature the distribution of forest and urban forestry insects which have been reported for the years of 1991 and 1992. Each year Illinois district foresters and their associates are given reporting forms which request the following information: name of insect, date collected, host plant, county, severity of infestation, number of forest acres infested whether plantation or natural, and number of trees infested whether planted or natural. This information is complied into this report.

Other persons contributing reports are from the Illinois Department of Agriculture, Illinois Natural History Survey, University of Illinois, and Illinois Christmas Tree Growers Association.

If an insect specimen has been verified and deposited in the Illinois Natural History Survey (NHS) insect collection as a voucher specimen, the Illinois county has the NHS designation. Researches wishing to construct regional or national distribution maps for various insect species might find this information particularly valuable.

The map legend used in this report is as follows:


1991

1992

1991 & 1992

NHS

Shipment of Insect or Plant Specimens

Insect specimens -- Persons wishing to send insect specimens that might be added to the insect collection should include with the specimens the following information: date of collection, county and nearest city, host plant, and collector's name. Live insects should be placed in a plastic bag with enough host plant foliage to sustain the insects for at least 3-4 days of travel time. Water should not be added to the bag. The bag should then be placed in a cardboard box for shipment. Send insect specimens to: James E. Appleby, NHS 607 E. Peabody, Champaign, IL 61820. Phone 217-244-3431.

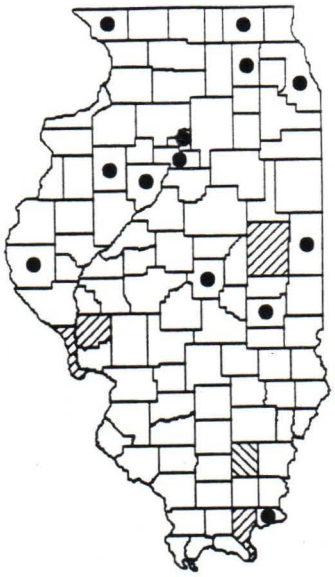
Plant specimens. -- Plant specimens showing disease symptoms should be prepared in the same manner as stated above for the insects. Send plant specimens to: Walker Kirby, N533 Turner Hall, 1102 S. Goodwin, Urbana, IL 61801. Phone 217-333-8414.

Tree Insects in Illinois

James E. Appleby
Department of Forestry, University of Illinois
Illinois Agricultural Experiment Station

Deciduous Tree Pests

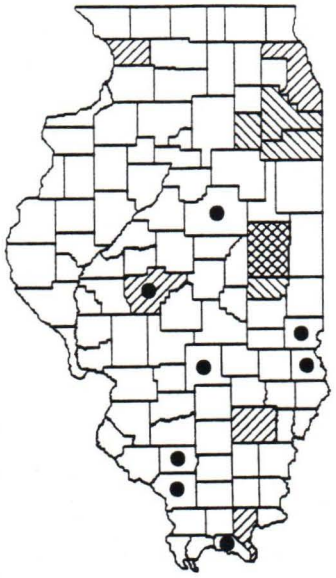
Walnut Caterpillar (*Datana integerrima*)



Light infestations occurred or no reports were received of infestations of the caterpillar in Illinois during 1992. This compared to moderate infestations occurring in the northern half of Illinois in 1991. Some trees growing on poor soils still remain in a weaken state due to the very severe drought of 1988 and lighter than normal amounts of precipitation in 1989. Walnut growers should examine trees at weekly intervals during July and August for infestations. Foliar sprays of *Bacillus thuringiensis* will give good control.

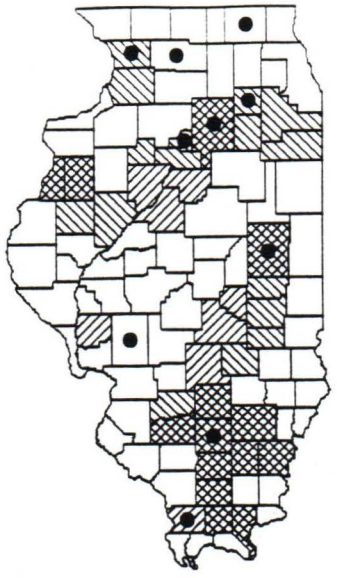
Contributors: David Johnson.

Elm Leaf Beetle (*Pyrrhalta luteola*)



Light infestations of the elm leaf beetle occurred throughout Illinois in 1992. During 1991 moderate to heavy infestations occurred in central Illinois. Foliar sprays of carbaryl (Sevin) or *Bacillus thuringiensis* strain *san diego* will give control.

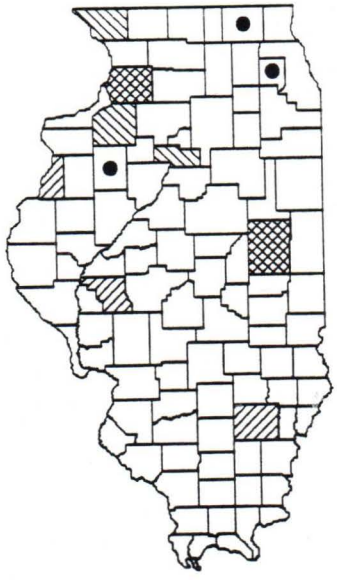
Contributors: Jim Appleby, Tom Gargrave.



Eastern Tent Caterpillar (*Malacosoma americanum*)

The 1991 season was the fifth consecutive year in which populations of this insect have been very high in most areas. Only a few light infested areas were reported in the northern, far western, and far southern Illinois in 1991. In 1992 a dramatic change occurred in the population levels of this insect. No reports were received of high populations in any areas. Moderate infestations were only reported in some in the northern half of Illinois. Most areas reported only light infestations. Black cherry and crabapple were the host trees reported. During some years when black cherry is completely defoliated it seems to be able to tolerate such defoliation without much lasting damage. Therefore control measures are not needed.

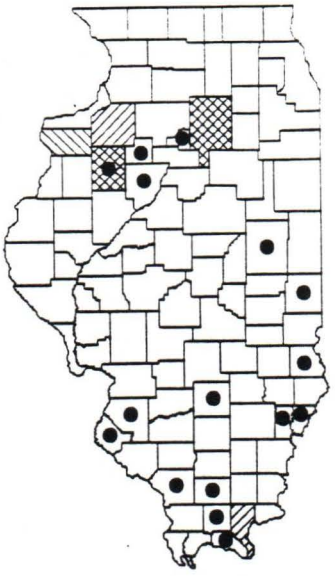
Contributors: Jim Appleby, Mark Brown, Ralph Eads, Stephen J. Felt, Tom Gargrave, David Johnson, Barrie McVey, Randy Timmons.



Bronze Birch Borer (*Agrilus anxius*)

Large numbers of birch trees died during 1989, and many trees remain in a weakened state even in 1992 due to the severe drought of 1988. Birch trees must be mulched, fertilized, and watered during drought periods to keep the trees in a vigorous growing condition. Trees that are well maintained and sprayed with chlorpyrifos (Dursban) in early June, and early July will generally continue to improve. High to moderate infestations were reported in areas of central and northern Illinois.

Contributors: Jim Appleby, Mark Brown, Ralph Eads, Stephen J. Felt, Randy Timmons.



Mimosa Webworm (*Homadaula anisocentra*)

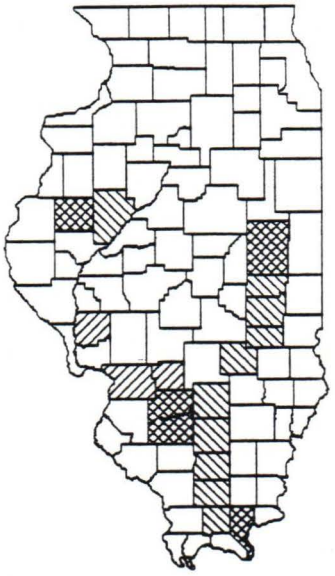
Since 1986 populations of this insect have been very low. In 1990 no reports were indicated, however in 1992 low to moderate infestations were reported in some areas of northern and central Illinois on honey locust. Many years ago this insect had high populations in central and southern Illinois on thornless honey locust and mimosa. When the webs are still small, foliar sprays of *Bacillus thuringiensis*, malathion and or carbaryl (Sevin) will give good control.

Contributors: Stephen J. Felt, Randy Timmons.

Oystershell Scale (*Lepidosaphes ulmi*)

Several reports of this scale were indicated for 1992. Heavy infestations were reported on silver maple and ash in northwestern and northcentral Illinois. This scale is easily controlled with a full coverage spray in mid June using a superior grade horticultural oil, malathion, or diazinon.

Contributors: Ralph Eads, Stephen J. Felt, Randy Timmons.



Fall Webworm (*Hyphantria cunea*)

Since 1990 light infestations have been reported and the same occurred in 1992. Walnut, mulberry, black cherry, and hickory were host trees. Control is usually not necessary.

Contributors: Jim Appleby, Mark Koch, Barrie McVey.

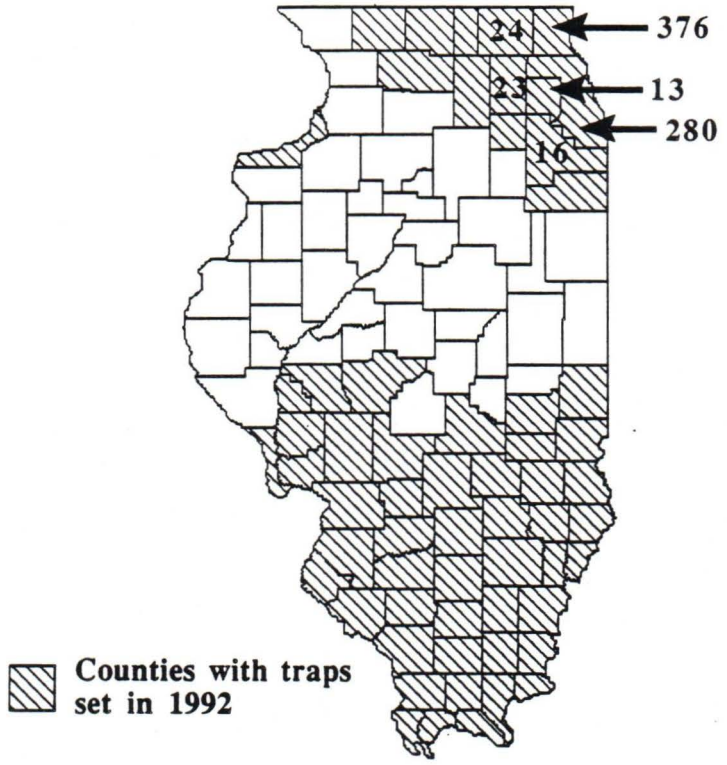
Gypsy Moth (*Lymantria dispar*)

There are no known areas within Illinois where severe tree defoliation has resulted from the gypsy moth. Except for the slight decrease in numbers of moths caught in 1992, since 1985 there has been an increase in the number of moths caught in pheromone traps in Illinois. The 1992 catch was from traps set within the northern regions of Illinois.

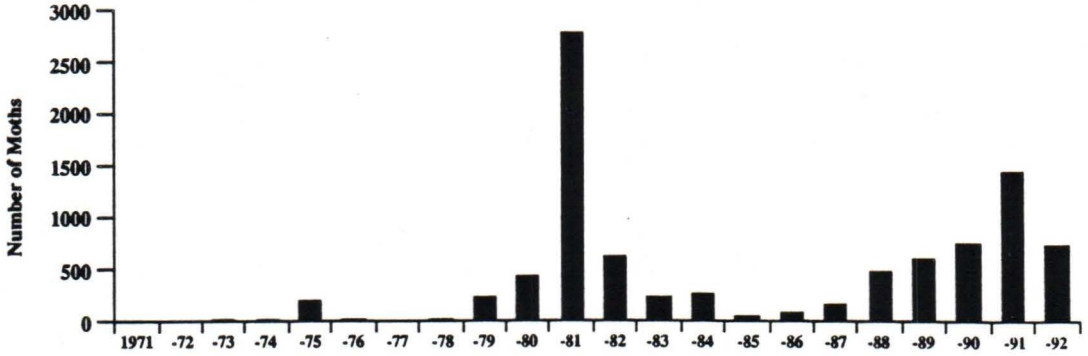
According to records from the Illinois Department of Agriculture, most gypsy moth egg masses have accidentally entered Illinois on such items as firewood logs, lawn furniture, camping equipment, plants, etc. from states that have active infestations of the moth. During 1991 nursery plants infested with egg masses were shipped from a nursery in Pennsylvania to Illinois. According to personnel of the Illinois Department of Agriculture, all the egg masses were finally located and destroyed.

To the present date, aerial applications of *Bacillus thuringiensis* have successfully suppressed the gypsy moth within Illinois. The excellent control program conducted by the Illinois Department of Agriculture in cooperation with the USDA APHIS PPQ, have kept the gypsy moth under control. With out a doubt, if control measures were not initiated in the late 1970's, Illinois today would be suffering from gypsy moth infestations. Whether the present control program can continue to be successful will depend greatly on adequate funding for control programs in all communities. If a few communities vote not to participate in control programs, then it is inevitable that the moth will quickly spread, and the program of containment will be over. The gypsy moth would then cause great damage to Illinois trees, and great discomfort to Illinois citizens.

732 Gypsy Moths Caught in 1992 in Illinois



Total Gypsy Moths Caught in Illinois Traps



Information for the map and chart obtained from the Illinois Department of Agriculture.

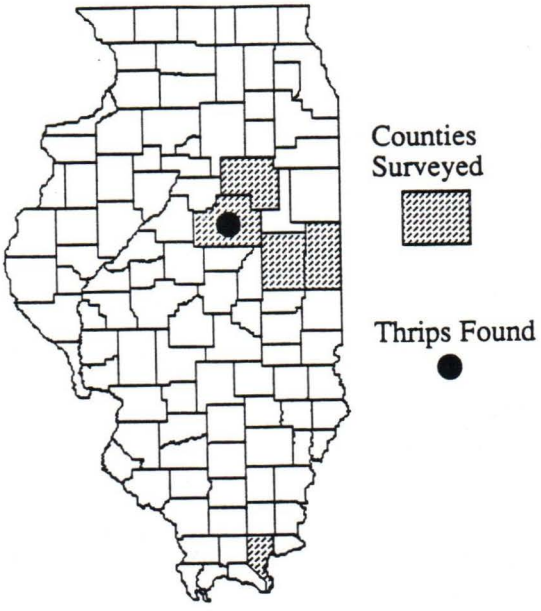
Pear Thrips (*Taeniothrips inconsequens*)

The pear thrips is an exotic insect first discovered in California in 1904. Since that time it has become a serious pest in the northeastern states. Lewis (1973) gave the hosts as maple, basswood, beech, walnut, oak, white ash, dogwood, lilac, grape, pear, apple, cherry, peach, plum, apricot, and quince. The thrips feed on leaf buds, and the unfolding foliage and flowers of the plant. The feeding causes the leaves to become deformed and often there is defoliation, in addition when flowers are present they may be deformed and drop prematurely. The thrips damage has impacted the maple sugar industry in the northeastern states, and the damage causes a decrease in the quality of the fall foliage thereby impacting the tourist industry.

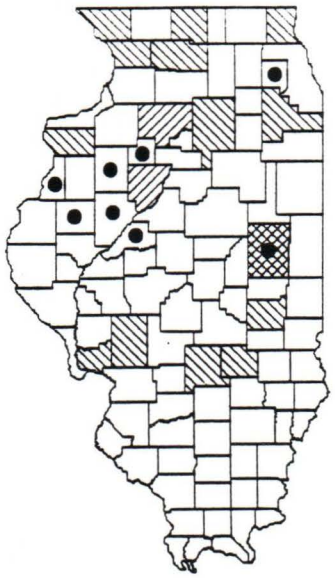
During 1992, a Cooperative Agricultural Pest Survey (CAPS) of the USDA-APHIS-PPQ conducted a pear thrips multi-state survey which included the eastern states as well as the states of Minnesota, Wisconsin, Illinois, Indiana, and Ohio. The pear thrips were found in all of these five states and they were all new state records. In Illinois Charles Helm of the Illinois Natural History Survey working in the CAPS program discovered the pear thrips in a trap located in McLean County Illinois in the week ending April 18, 1992. Of the five counties in Illinois where traps were placed only in the one area was thrips found. There was no thrips damage reported in any of the midwestern states in 1992. Of course this insect could pose as a serious pest of many of our Illinois trees.

The thrips are small insects less than 1/16 inch in length. They are usually found on the lower leaf surface. Young thrips are white then change to a light yellow. The adult pear thrips is very dark brown nearly black. If unusual symptoms are found on the unfolding foliage, particularly of sugar maple, samples could be sent to J. E. Appleby at the Dept. of Forestry, NHS 607 E. Peabody, Champaign, IL 61820, and I will try to get verification on whether pear thrips are present. The foliage with small branches should be placed in a plastic bag and then placed in a box. There is no need to add any moisture to the bag.

Pear Thrips



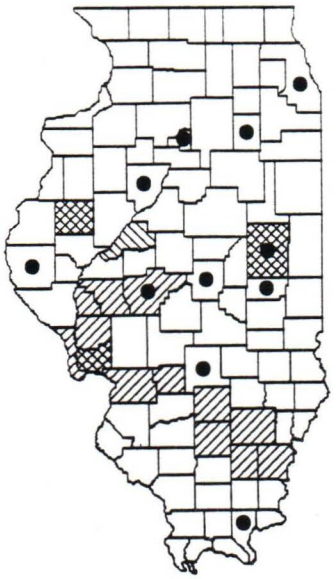
Evergreen Pests



European Pine Sawfly (*Neodiprion sertifer*)

Light to moderate infestations were reported in 1991 and the same situation existed in 1992. *Bacillus thuringiensis* will not control this insect, but carbaryl (Sevin), or malathion will give good control. Plantations should be inspected at weekly intervals during April and May for infestations.

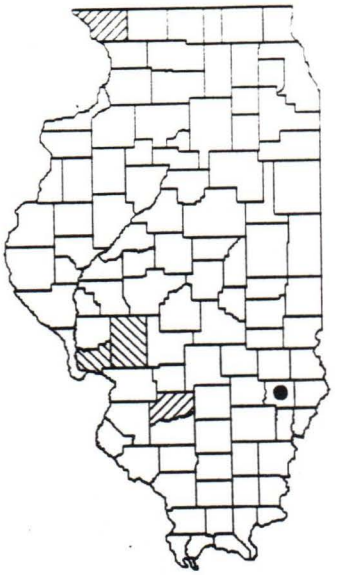
Contributions: Deizman, Ralph Eads, Stephen J. Felt, Tom Gargrave, David Johnson, Tom Lamer, Jerry Pirtle, George Poe, Pete Skuba, Tony Wagner.



Bagworm (*Thyridopteryx ephemeraeformis*)

In 1992 infestations in most areas of central and southern Illinois were moderate to heavy in contrast to light to moderate infestations in most reporting areas. Host plants reported were blue spruce, white pine, and Scotch pine. Complete defoliation of an evergreen generally results in the death of the plant. Foliar sprays of *Bacillus thuringiensis*, carbaryl (Sevin), and/or malathion will give control of the larvae. Control should be accomplished in June while the larvae are still small. Most materials are ineffective for controlling large larvae, in such instances use *B. thuringiensis*.

Contributors: Grant Haley, Tom Lamer, Barrie McVey.



Pine Needle Scale (*Chionaspis pinifoliae*)

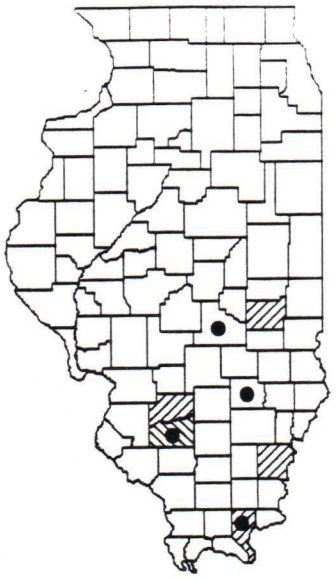
In general infestations were light throughout the state, however there were isolated high populations. Control can be accomplished with a superior oil spray, malathion, or diazinon applied in mid May after all the overwintering eggs have hatched.

Contributors: Tom Lamer, Pete Skuba.

Pales Weevil (*Hylobius pales*)

New plantations where there has been no pines planted for at least two years are generally free from any problems with this insect. Problems begin usually after trees are harvested over a period of years. Fresh pine stumps and slash serve as sites for the development of the larvae. High mortality of seedling trees and severe branch damage of larger trees can occur with moderate infestations of this weevil. Spray applications of chlorpyrifos (Dursban) in early to mid March to pine stumps is advisable. It is always better to apply the insecticide early rather than later as it is desirable to kill the adults before they have a chance to deposit eggs on the stumps. Chlorpyrifos residue will be effective for at least 4 weeks. Where this weevil has had a history in a certain plantation of causing problems, it might be necessary in such plantations to spray the seedling trees in mid-July as well as the trees that may be harvested that same year. White pine is the preferred host, but damage may also occur on Scotch, Austrian, Douglas fir, and spruce species. Infestations in southern Illinois were light in 1992.

Contributors: Jim Appleby.



Redheaded Pine Sawfly (*Neodiprion lecontei*)

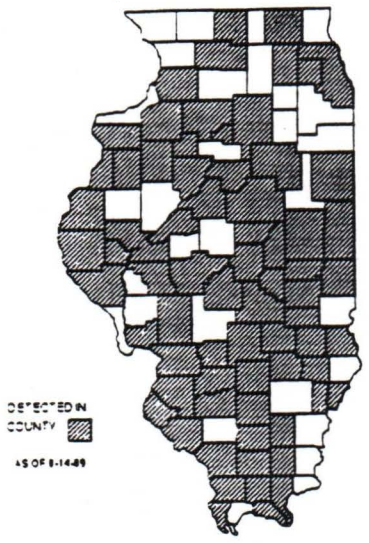
Populations of this insect vary considerably from year to year. No reports were received for 1988 or 1989, and only a light infestation was found in one county in 1990. Light to moderate infestations were reported in 1991 in 3 Illinois counties. In 1992, only Washington County reported having a heavy infestation on loblolly pine. This species is also very unpredictable on when larvae will be present. The dates in 1991 when larval stages were found are as follows: April 23, June 22, and Sept. 30. In all three instances, Scotch pine was the host tree species. Foliar sprays of malathion or carbaryl (Sevin) will give control when larvae are noted. *Bacillus thuringiensis* will not control sawflies.

Contributors: Mark Koch.

Zimmerman Pine Moth (*Dioryctria zimmermani*)

Heavy infestations of this moth continue to occur in plantations where control measures have not been used. Frequently the terminal branch and side branches along the tree trunk will die. This insect is most often a pest in the northern half of Illinois. Scotch, red, and Austrian pines are attacked. The most ideal time to accomplish control is with a foliar and trunk spray of chlorpyrifos (Dursban) in late July or early August. Some control has resulted with sprays applied in mid March. Treatments at other times are ineffective as the borer larvae are established in the wood and thereby protected.

Contributors: J. Appleby, George Poe.



Pinewood Nematode (*Bursaphelenchus xylophius*)

Many Scotch, red, and Austrian pines have already been killed in Illinois by this nematode. The remaining trees are very susceptible. In Illinois the Carolina pine sawyer, *Monochamus carolinensis*, is the primary insect vector of the nematode. During the sawyer feeding on healthy pines the nematodes leave the beetle's body and infest the feeding wound. Once inside the pine tissue the nematodes multiply rapidly and in several months the tree is dead. All dead pines should be removed as soon as possible and the wood burned and/or made into mulch. Beetle emergence begins in late May and continues until early August. The peak of emergence is in mid June and early July.

Common Pine Shoot Beetle, *Tomicus piniperda*,

The following information on the common pine shoot beetle (CPSB) is complied from my own observations I made during a visit to an infestation in Indiana in Sept. 1992, and from references and notes sent to me from the following persons and agencies: USDA Animal and Plant Health Inspection Service (APHIS); Clifford Sadof, Purdue University; Robert Waltz, Indiana State Entomologist; Bo Langstrom, Swedish University of Agricultural Sciences; Steven Katovich, USDA Forest Service; and Deborah McCullough, Michigan State University.

On July 1, 1992 in Lorain County, Ohio a beetle was discovered which was identified as *Tomicus piniperda*, the common pine shoot beetle (CPSB). Although there is no proof on how the beetles entered the U. S., there is the suspicion that the beetles entered in wood that is used commonly in crating materials on ships. Most likely they were in wood that still retained its bark. This beetle is native to Europe and Asia where it has been regarded as a forest pest. The major host tree in Europe is Scotch pine, however it has been found to infest spruce, fir, and larch, but apparently is rare in such hosts. Surveys to date conducted by APHIS, Illinois Department of Illinois, and different state agencies have reported the beetle in Kane and Will counties in Illinois, 13 northern Indiana counties, 1 southeastern Michigan county, 14 northeastern Ohio counties, 2 northwestern Pennsylvania counties, and 2 western New York counties. In the U.S. in most instances the beetle was found infesting Scotch pine, but in some instances it has been found in Austrian, white, and red pines.

From what is known of the life history of the CPSB in Europe and from some information from U.S. observations, I speculate the following about what the life history of this beetle might be in the Midwest:

The adult beetles will overwinter in the thickened bark at the base of older pine trees most likely Scotch, Austrian, and red. High mortality of the overwintering adults may occur. During warm periods in March the adult beetles will fly to pine stumps from trees cut in November or December, to pine trees stressed because of drought or other environmental conditions, to pine trees dying of pine wilt disease, to pine logs cut during the winter months, and to larger slash trees. At such sites the female beetle will borer into the pine wood. For example, if the site is a stressed pine tree or stump, the female beetle will enter the wood and borer out a vertical tunnel which may be several inches in length. Short side tunnels at a 90 degree angle to the main tunnel will be made along the sides of the main tunnel. In each such tunnel will be deposited an egg. Some beetles that are closely related to this beetle species will construct resin tubes on the outside of the bark. Apparently CPSB when feeding on standing trees that are weakened will also cause an outflow of resin that hardens into tubes. Evidence of this beetle working under the bark of stumps and cut logs, will be the small amounts of very fine sawdust pushed out of tiny openings. After egg laying

is completed, the beetles will emerge from the wood, fly to healthy pine twigs where each beetle will enter a twig by chewing a small entrance hole. The beetle will excavate about an inch long tunnel within the twig. The tunnel will be clean of any frass material because that is pushed out the entrance hole. Around the entrance hole there may be a small amount of hardened resin. The beetle may spend several weeks within a twig then exit and fly to another twig. The injured twig will usually droop and then die. Most twigs that I observed in Indiana were from 3 to 8 inches in length.

The eggs will hatch within the short tunnels under the bark. Beetle larvae will develop by feeding under the bark. The time interval from egg deposition until the beetles are in the adult stage will probably be about 3 months. So probably in June within the Midwest, adult beetles will emerge. The beetles will fly to the pine twigs especially that of current year's growth and enter into the twig. Several twigs may be damaged during the summer by each adult beetle. They will feed within the twigs during the summer and early fall. When cooler temperatures prevail they will exit the twigs and seek hibernating quarters at the base of trees in the thickened bark of probably large trees.

Since the adult beetles will probably be most abundant in June and July, shoot damage will be most noticeable in the months of July through September. But since some adults may survive the winter, a few shoots will most likely be damaged in the months of March through June. There is some evidence to suggest that temperatures below 0 degrees Fahrenheit may kill the overwintering adults. In areas that have persistent snow cover, the snow will provide some insulation to the low temperatures so beetle survival might be better in such areas.

A pine twig that is killed by CPSB may be 3 to 8 inches in length. At the junction of the live and dead twig tissues will be a small hole. Surrounding the entrance hole there may be a small amount of hardened pine resin. If the twig is cut in half, there will be a tunnel in which the adult beetle has been feeding. There may be a small black or very dark brown beetle which is slightly less than 3/16 of an inch in length inside. If a caterpillar is found inside the twig, it is not the CPSB.

What can pine producers do at the present to lessen the impact this beetle may have on the industry. Follow the following practices: Remove all dead and dying pines and either burn the wood or convert it into chips that are then spread. This practice is important in not only preventing increased populations of CPSB, but will prevent the emergence of pine sawyers which are the primary vectors of the pinewood nematode which causes pine wilt disease. Remove pine stumps to ground level or spray the stumps with an insecticide in early March. Slash should be burned or converted to chips. These practices will not only lessen the impact of this beetle, but will also control the populations of the pales and northern pine weevils.

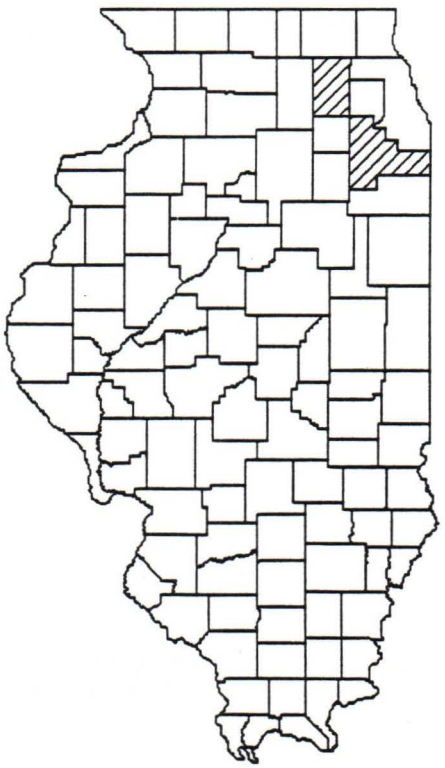
From what I observed in an Indiana infestation during Sept. 1992, I would consider the damage as minor on Christmas trees. Approximately 60% of the trees were infested, however the two or three dead twigs on each tree I would consider of minor importance. This particular nursery had many pine stumps that were as much as 12" tall. There was also a very large slash pile. The stumps and slash pile I am sure contributed to the problem. However, I was distressed to read one article that stated "Should this insect be able to successfully attack and breed in white and southern pines, the timber industry could be severely affected as reductions of 39% in volume growth have been reported from Poland."

To prevent the spread of this beetle, APHIS has imposed a plant quarantine on Kane and Will counties in Illinois, the entire state of Indiana, and the infested counties within Ohio, Michigan, New York, and Pennsylvania.

Consumers who purchase Christmas trees should not be concerned that this beetle will cause any harm to household items, plants, humans, or pets. The chance of even purchasing an infested tree is remote, and the possibility of ever finding a 3/16 inch long beetle is indeed slim. If tiny beetles are found near windows, they are probably carpet and/or granary beetles.

As research studies progress in the United States, we will have a much better understanding of the life history and control of this insect.

Counties in Illinois Infested with the Common Pine Shoot Beetle



Miscellaneous Insect Reports

Illinois Counties	Insect	Host	Date in 1992	Degree of Infes-tation*	Contributors
Carroll	Aphid	Norway maple	3-Sep	M	Ralph Eads
Carroll	"	White pine	30-Sep	M	Ralph Eads
Jo Daviess	"	White pine	30-Sep	M	Ralph Eads
LaSalle	"	Green ash	28-May	L	R.Timmons,Mark Brown
Madison	"	Poplar,tulip	22-Jun	M	Mark Koch
Marion	"	Green ash	25-Jun	L	Tony Wagner
Mason	"	Silver maple	29-Jun	M	Grant Haley
Ogle	"	Norway maple	Aug	H	George Poe
Tazewell	"	Crab apple	17-Jun	M	Brown/Mitckes
Warren	"	Cherry	24-May	M	Barrie McVey
Whiteside	"	Hard maple	16-Jun	H	Ralph Eads
Hamilton	Arkansas pine sawfly	Scotch pine	17-Apr	M	David Johnson
Johnson	"	Loblolly pine	14-May	H	Jerry Pirtle
Johnson	"	Red pine	21-May	H	Jerry Pirtle
Marion	"	Scotch pine	15-May	L	Tony Wagner
Wayne	"	Loblolly pine	20-May	M	David Johnson
Wayne	"	Scotch pine	26-Apr	M	Pete Skuba
LaSalle	Ash borer	White ash	16-Jun	H	Randy Timmons
Lake	Ash/lilac borer	Black cherry	20-May	H	Deizman
LaSalle	Boxelder bug	Norway maple	28-Sep	L	Randy Timmons
Bureau	Carpenter ant	Weeping willow	15-Jun	M	Randy Timmons
LaSalle	Cottony maple scale	Hard maple	30-Mar	L	Randy Timmons
LaSalle	Earwig	Norway maple	31-Aug	L	Randy Timmons
Carroll	Elm leafminer	Elm	26-May	M	Ralph Eads
Stephenson	"	American,red elm	21-May	M	Ralph Eads
Whiteside	"	Slippery elm	24-May	L	Ralph Eads
Fulton	Grasshopper	Multiple plants	15-Sep	M	Barrie McVey
McDonough	"	"	15-Sep	M	Barrie McVey
Wayne	"	"	15-Sep	M	Barrie McVey
Carroll	Ipps beetle	Red pine	8-May	H	Ralph Eads
Tazewell	June beetle	Oak	17-Jun	M	Brown/Mitckes
Carroll	Katydid	Black walnut	22-May	L	Ralph Eads
LaSalle	Leafcutter	White Ash	27-May	L	Randy Timmons
LaSalle	Leafcutter bees	Redbud	31-May	H	R.Timmons,Mark Brown
Carroll	Leafminer	Pin oak	20-May	M	Ralph Eads
Henry	Lecanium scale	Black walnut	4-May	M	Stephen Felt
Carroll	Maple bladder gall	Maple	3-Sep	L	Ralph Eads

Illinois Counties	Insect	Host	Date in 1992	Degree of Infes-tation*	Contributors
Alexander	Nantucket pine tip moth	Scotch Pine	22-May	H	Jerry Pirtle
Union	"	Scotch Pine	28-May	M	Jerry Pirtle
Carroll	Nipple gall	Hackberry	3-Sep	L	Ralph Eads
LaSalle	Nipple gall psyllid	Hackberry	27-May	M	R.Timmons,Mark Brown
Bureau	Oak gall wasp	Pin oak	15-May	L	R.Timmons,Mark Brown
Clinton	Pin oak gall	Pin oak	6-May	L	District 15,Region 4
Jersey	Pine bark aphid	Scotch, white pine	20-May	M	Tom Lamer
Jersey	"	White pine	Aug	M	Tom Lamer
LaSalle	Pine nematode	Scotch pine	30-Jun	H	Randy Timmons
Washington	Pine spittlebug	Scotch pine	2-Jun	M	Mark Koch
Coles	Pine webworm	Scotch pine	26-Apr	L	Charleston District
Bond	Plum borer	Ornamental plum	16-Apr	L	Mark Koch
Lake	Spider mites	Hard maple	25-Aug	H	Deizman
Lake	"	"	28-Aug	H	Deizman
White	Spittlebug	Scotch pine	20-Apr	M	David Johnson
Peoria	Walnut scale	Walnut	18-May	H	Brown/Mitckes
Clinton	White marked tussock moth	Elm	15-May	L	District 15,Region 4
Johnson	White pine aphid	White pine	22-May	L	Jerry Pirtle

*L - Light
M - Moderate
H - Heavy

Tree and Shrub Problems Diagnosed at the University of Illinois Plant Clinic -- 1992

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The listing that follows details all of the tree and shrub problems diagnosed at the Plant Clinic in 1992. As with last year's report, samples are organized by host, problem, and forestry district in which the problem occurred. The number following the host indicates the actual number of samples received involving that host. Since one host may have more than one problem, the number of problems is often greater than the number of hosts. For further details on specific crops or county problems, contact the Plant Clinic.

These samples are not solicited and do not represent a statistical sampling of tree and shrub problems in Illinois. Instead, these are the samples that were submitted to the Plant Clinic by individuals, extension advisers, foresters, agribusiness personnel, and professors. There were a total of 685 samples in this category of trees and shrubs. That number is approximately 24% of all plant samples received at the Plant Clinic in 1992. In 1991 17% of the samples fell into this category.

It is difficult to make any inferences out of trends in Plant Clinic samples since sampling varies so much from year to year. However, there are still a few interesting points to be made concerning the major diseases.

In the recent past there was a fairly steady increase in cases of positives for Dutch Elm Disease and Pine Wilt. In 1992 incidence of these diseases confirmed at the Plant Clinic decreased. Obviously there are fewer elms in Illinois now, but we are uncertain why there were fewer cases of Pine Wilt. It is possible that public awareness of Pine Wilt symptoms has become greater and samples have not be sent for confirmation.

The incidence of Verticillium on maple has once again declined, as was reported in 1991. Verticillium has, however, shown up in a greater number of cases on other hosts. We believe that Verticillium may be a factor in some of the Ash cases of decline.

Positive Oak Wilt cases in 1992 were double those of 1991. In past years the causal organism has been difficult to isolate but was easily recovered in 1992. This same phenomenon was noticed at other midwest Plant Clinics.

Host	Problem	District in Which Reported (Incidence)																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Apple(14)	Apple Scab(2)										1					1							
	Apple Maggot										1												
	Calcium Defic.										1												
	Cedar Apple Rust									1													
	Chemical Burn														1								
	Codling Moth	1																					
	Environmental(2)	1									1												
	Fire Blight(4)		1	1						1	1												
	Nectria Canker							1															
	Plum Curculio	1																					
	Powdery Mildew(2)			1							1												
	Scale																			1			
	Sooty Blotch										1												
Arborvitae (13)	Environmental(10)	1		1				1	1		4		1			1							
	Mite Injury																	1					
	Pestalotia Blight					1					1												
Ash(27)	Anthracnose(5)						1				1	1			1		1						
	Ash Yellows Suspect				1																		
	Cankers							1															
	Drought(2)			1	1																		
	Environmental(6)						1	1		2	1							1					
	Herbicide Injury										1												
	Scorch	1																					
	Verticillium Suspect	1		1			1	3			3									1			
Azalea(2)	Phytophthora							1															
	Thrips							1															
Barberry(4)	Environmental										2												
	Mechanical Injury										1												
	Vert Suspect			1																			
Birch(11)	Birch Leafroller																		1				
	Environmental(4)							1			3												
	Eriophyid Mite	1																					
	Iron Chlorosis										1												
	Marssonina Spot										1												
	Melanconium						2																
	Wood Rot							1															

Host	Problem	District in Which Reported (Incidence)																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Boxwood	Canker							1															
Buckeye	Leaf Blotch										1												
Buddleia	Chemical injury							1															
Cedar,Red	Phomopsis Blight															1							
Cherry	Site Stress	1																					
Cotoneaster	Environmental							1															
Crabapple (7)	Apple Scab(3)										3												
	Environmental										1												
	Fire Blight			1															1				
	Herbicide Injury					1																	
Currant(3)	Anthracnose							1															
	Cane Blight							1															
	Root Rot							1															
Cypress(3)	Drought										1												
	Insect Gall										1												
	Scale																		1				
Dogwood(16)	Botrytis Blight										1						1						
	Canker										4												
	Environmental						1				5												
	Herbicide Injury						1																
	Spot Anthracnose	1								1													
	Sprayer Injury										1												
Douglas Fir (10)	Environmental									3	2					1		2					
	Needle Cast									1													
	Planting Problem										1												
Elm(33)	Black Spot															1							
	Casebearer			1																			
	Cytospora Canker							1															
	Dutch Elm Disease		2	2		1		8									1						
	Elm Leaf Miner	1		1																			
	Environmental		3			1		7															
	Insufficient		1														1						
	Lichens						1																

Host	Problem	District in Which Reported (Incidence)																				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Elm cont.	Slime Flux		1																				
	Wetwood			1																			
Euonymus(8)	Environmental									1	4				1								
	Root Rot										1												
	Scale insect														1	1							
Evergreen	Nectria Canker						1																
	Environmental															1							
Fir(7)	Cytospora Canker										1												
	Environmental					1	1		1							1							
	Needle Blight																	1					
	Sphaeropsis										1												
Hackberry (4)	Environmental						1																
	Ganoderma Rot																1						
	Psyllid Galls	1																1					
	Witches Broom																	1					
Hemlock (3)	Environmental										2												
	Herbicide Injury										1												
Hickory	Canker		1																				
	Gnomonia Spot															1							
Holly (8)	Anthracnose							1															
	Canker							1			1									1			
	Environmental										3												
	Leaf Miner										1												
	Leaf Spot										2												
Honeylocust	Canker	1	1																				
Honeysuckle	Leaf Blight										1												
Juniper (17)	Cedar Apple Rust										1												
	Environmental						1			1	3					1		1					
	Phomopsis Blight		1				1	1		1	4						1						
Larch	Botryosphaeria	1																					
Lilac(6)	Aphid		1																				
	Bacterial Blight										1												

Host	Problem	District in Which Reported (Incidence)																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Lilac cont.	Canker										1												
	Environmental										2												
	Iron Chlorosis		1																				
	Leaf Spot																		1				
Linden (3)	Herbicide Injury										1												
	Solvent Injury										1												
	Twig Gall											1											
Locust	Environmental							1															
Magnolia (6)	Botryosphaeria										2												
	Environmental							1															
	Grasshopper	1																					
	Phomopsis Canker										1												
	Verticillium suspect																				1		
Maple(121)	Anthracnose(37)	2		7		4	4			3	11	1			1	1	1	1		1			
	Basal Canker									1													
	Bleeding Canker							1															
	Canker										1												
	Chemical Injury									1													
	Cicada Injury							1															
	Cottony Scale							1															
	Environmental	1	1	4	1	2	5	8			23			1	1		1		1				
	Heart Rot										1												
	Insufficient									1													
	Iron Chlorosis									1	2												
	Lecanium Scale																		1				
	Oystershell Scale										1												
	Petiole Borer										1												
	Phyllosticta Spot																1						
	Potato Leafhopper										1												
	Root Rot	1																					
	Scorch			1							1				1								
	Spindle Gall						1																
	Vein Pocket Gall					1				1	1												
	Verticillium suspect	1		1			1	4		1	3												
	Verticillium	2						1	1	1	1								1				
	Wood Rot							1															
Mimosa	Environmental																		1				

Host	Problem	District in Which Reported (Incidence)																				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
MountainAsh (4)	Cankers(3)		1								2												
	Environmental		1																				
Oak(113)	Alcoholic Flux			1																			
	Anthracnose(6)		2	1							2						1						
	Canker/Dieback		4	1		3																	
	Environmental		2	2	1		1	13			2					3				1		1	
	Gouty Oak Gall			1							1												
	Herbicide Injury		2	4		1	1													1		1	
	Insufficient														1								
	Iron Chlorosis						1			1	1				1	1					1		
	Kermes Scale										1												
	Mechanical Injury		1																				
	Oak Leaf Skeletonizer										1												
	Oak Wilt		4	4		1	1	6				1			3		1	1					
	Oak Wilt Suspect		5					4		3	2	1			2	2	2		1			1	
	Plant Bug						1																
	Powdery Mildew															1							
	Rose Scale										1												
	Scale						1																
	Soil Problem		4																				
	Twig Pruner									2													
	Vein Pocket Gall				1											1						1	
	Wood Rot					1																	
Pawpaw	Environmental																				1		
Pear,Bradfo (4)	d																						
	Alternaria Blotch										1												
	Botryosphaeria										1												
	Environmental			1			1																
Pecan	Environmental										1												
	Herbicide Injury					1																	
Pine(109)	Brown Spot	1	1									1											
	Cytospora Canker	1		1																			
	Dothistroma						1	1			2									1			
	Environmental		1	1		1	6	8		3	7	3	1		1	1	2	8	1			1	
	Herbicide Injury						1																
	Insufficient																1				1		
	Lophodermium																	2					

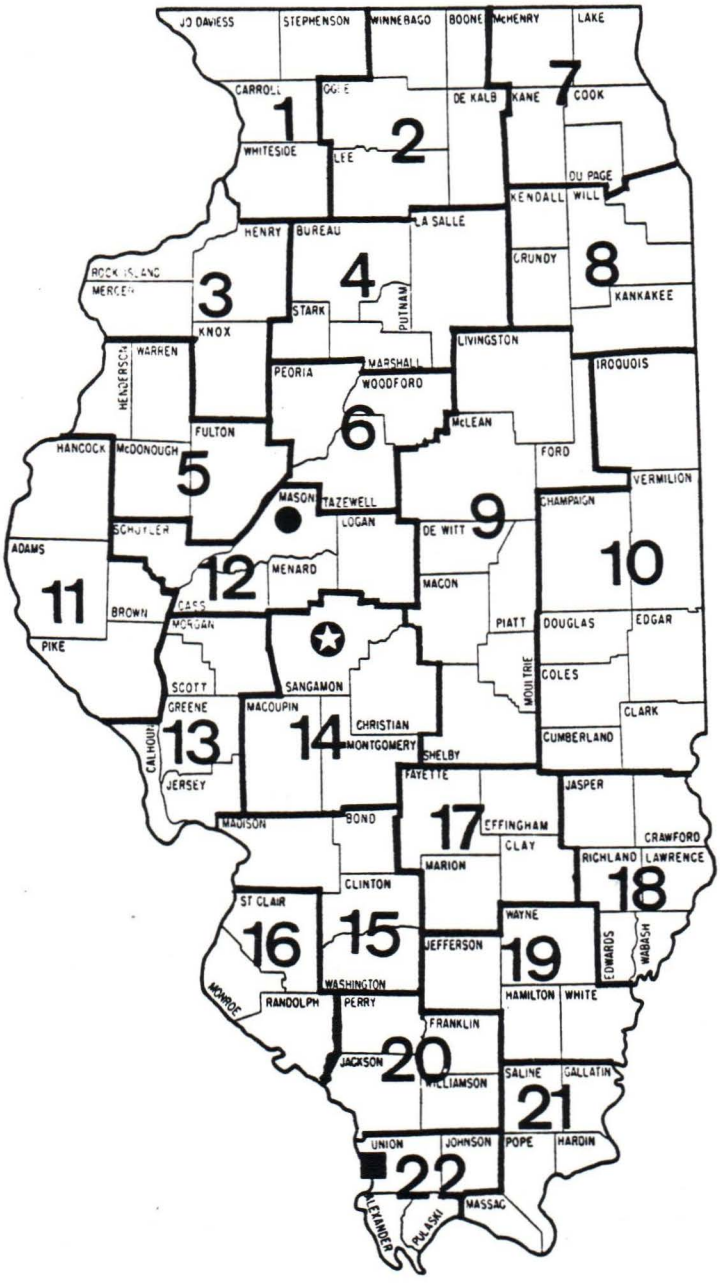
		District in Which Reported (Incidence)																				
Host	Problem	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Pine cont.	Nantucket Pine																						
	Tip Moth		1																				
	Needle Cast							1															
	Pales Weevil	1																					
	Physical Injury						1																
	Pine Bark Aphid										1									1			
	Pine Needle Scale										1						1						
	Pinewood Nema		1		1	1		1			2	1			1								
	Pine Wilt suspect						1	2							1	1							
	Root Injury							1		1		1				1		1					
	Sirococcus Blight																1						
	Tip Blight	2	1			1		2			3					1	2	2					
	Unknown					1												1					
	White Pine																						
	Decline							1		1													
	Zimmerman Moth									1													
Plum,Purple	Environmental						2		1	1													
Poplar(3)	Canker	1																					
	Herbicide Injury				1																		
	Leaf Beetle										1												
Raintree	Environmental										1												
Redbud(10)	Anthracnose	1										1											
	Botryosphaeria																1						
	Botrytis	1																					
	Canker										1												
	Environmental										2												
	Herbicide Injury															1							
	Leafhopper										1												
	Scorch										1												
	Verticillium																1						
	Vert. suspect										1												
Redwood	Environmental									1	1												
Rhododendro																							
	Canker										1												
	Crown Rot										1												
	Environmental				1																		
	Root Rot							1															

Host	Problem	District in Which Reported (Incidence)																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Rose(2)	Mosaic Virus																						2
Smoke Tree (3)	Verticillium								1		1												
	Vert. suspect									1													
Spirea(2)	Environmental								1														
	Powdery Mildew		1																				
Spruce(39)	Cytospora		1	3			2	1			1									1			
	Environmental		3	1		1	1	3	1		2						1	4	1				1
	Hemlock Scale										1												
	Herbicide Injury						1	1															
	Insufficient									1	1												
	Rhizosphaera					1																	
	Sirococcus							2															
	Spider Mites		1	3				2			1						1						
	Spruce Bud Scale		1					1			2												
Sumac (2)	Botryosphaeria						1																
	Environmental								1														
Sweetgum (3)	Compaction																1						
	Environmental																		1				
	Nectria Canker															1							
Sycamore	Environmental							1															
Tuliptree (5)	Aphid										1												
	Botryosphaeria														1								
	Environmental										1												
	Nectria Canker										1												
	Vert.suspect										1							1					
Viburnum(4)	Environmental						1				3												
Walnut(8)	Cankers					2	1																
	Environmental									1	1												
	Eriophyid Mite					1																	
	Melanconium Blight									1													
	Oystershell Scale										1												
	Pyrenomycete											1											

Host	Problem	District in Which Reported (Incidence)																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
White Fringe	Canker									1													
Willow (7)	Canker			1						1	2									1			
	Environmental																1						
	Mechanical Injury										1												
Yew (9)	Environmental			1						2	4												
	Pestalotia Blight			1																			
	Root Rot																					1	

Total Number of Samples = 685

Illinois Forest Resources Districts



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